

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/002592

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ C12P19/12, C12N1/20, C12N9/10, C07H1/06, C07H3/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ C12P19/12, C12N1/20, C12N9/10, C07H1/06, C07H3/10

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CAP/REGISTRY/BIOSIS/MEDLINE/WPIIDS (STN)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2-115193 A (Mitsubishi Kasei Corp.), 27 April, 1990 (27.04.90), Claims; examples (Family: none)	1-42
X	JP 49-117688 A (Kakenyaku Kako Co., Ltd.), 11 November, 1974 (11.11.74), Claims; examples (Family: none)	1-42
X	JP 3-259090 A (Mitsubishi Kasei Corp.), 19 November, 1991 (19.11.91), Claims; page 5, lower left column; examples (Family: none)	1-42

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
31 May, 2004 (31.05.04)Date of mailing of the international search report
15 June, 2004 (15:06.04)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Eiichi Shirasawa et al., "Preparation of Di-D-fructofuranose 1,2':2,3' dianhydride by the Cultivation of Arthrobacter ureafaciens in the Inulin-containing Synthetic and Vegetable Media", J.Ferment.Technol., 52(3), 1974, pages 164 to 170	1-17, 23, 30-34 18-22
X Y	Ulrich Jahnz, et al., "Effective development of a biotechnical process: Screening, genetic engineering, and immobilization for the enzymatic conversion of inulin to DFA III on industrial scale", Landbauforschung Voelkenrode, 518(3), 2001, pages 131 to 136	35-42 18-22, 24-29
X Y	JP 4-271792 A (Mitsubishi Kasei Corp.), 28 September, 1992 (28.09.92), Claims; examples (Family: none)	35-42 18-22, 24-29
X Y	Atsushi Yokota et al., "Production of Inulin Fructotransferase(Depolymerizing) by Arthrobacter sp. H65-7 and Preparation of DFA III from Inulin by the Enzyme", J.Fermentl Bioeng., 72(4), 1991, pages 258 to 261	35-42 18-22, 24-29
A	JP 11-43438 A (Nippon Tensai Seito Kabushiki Kaisha), 16 February, 1999 (16.02.99), Full text (Family: none)	1-42
A	JP 1-285195 A (Director General of National Food Research Institute, Ministry of Agriculture, Forestry and Fisheries), 16 November, 1990 (16.11.90), Full text (Family: none)	1-42